



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,654	07/17/2003	Carrie Roberts	10019481-5	3849
7590	12/14/2004		EXAMINER	
HEWLETT-PACKARD COMPANY Intellectual Property Administration P.O. Box 272400 Fort Collins, CO 80527-2400			LIANG, LEONARD S	
			ART UNIT	PAPER NUMBER
			2853	

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/622,654	ROBERTS ET AL.
	Examiner	Art Unit
	Leonard S Liang	2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 17 July 2003.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-30 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-30 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 17 July 2003 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____.
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>03/19/04</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____.

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: The specification does not mention that this case is a continuation of case 10/194467.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

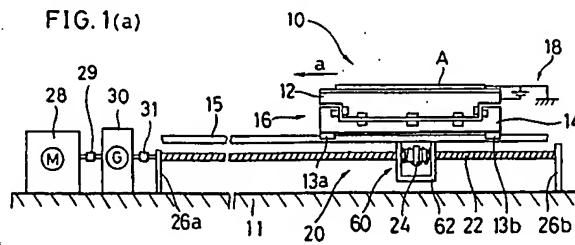
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 8-15, 17-20, 22-23, and 27-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Furukawa et al (US Pat 5467111).

Furukawa et al discloses:

- {claim 1} A printing mechanism (column 1, lines 6-8); a printhead that defines a printzone (optical system; column 7, lines 22-33; printhead defines a printzone is inherent to the invention); a tray (i.e. platen) adapted to support at least one sheet of print media (figure 1a, reference A, 12),



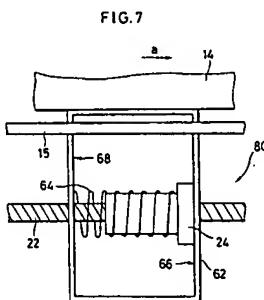
the tray adapted to move through the printzone during printing on the sheet (inherent since platen (i.e. tray) 12 moves with exposure mount 16; column 7, lines 22-33)

- {claim 2} the printhead defines a scanning axis (i.e. main scan; column 7, lines 25-27), wherein the printhead moves along the scanning axis during printing

(column 7, lines 25-27), and wherein the tray moves perpendicular to the scanning axis (i.e. sub-scan; column 7, lines 27-33)

- {claim 3} body, wherein the printhead is positioned within the body and the tray moves through the body during printing (inherent in view of teaching that “this invention relates to a transporting apparatus...suitable for use with a recording apparatus” (column 1, lines 6-8), which implies that the disclosed transporting apparatus is contained within a much greater body)
- {claim 8} first tray advancing mechanism (figure 1a, reference 24); second tray advancing mechanism (figure 1a, reference 22) that mates with the first tray advancing mechanism (column 2, lines 50-59)
- {claim 9} the first tray advancing mechanism comprises a gear (figure 1a, reference 24) and the second tray advancing mechanism comprises a track of recessed grooves (figure 1a, reference 22)
- {claim 10} the tray supports the sheet stationarily with respect to the tray (figure 1a, reference 12, A; column 7, lines 22-34)
- {claim 11} the tray moves from a start position, in a first direction, during printing (figure 1a, reference a) and the tray moves in a second direction opposite to the first direction, after printing to return to the start position (figure 7, reference a; “exposure mount 16 is moved in the direction of arrow a (or reversely)” (column 7, lines 28-29))
- {claim 12} the tray includes a biasing device that biases the sheet into a printing position within the tray (figure 1a, reference A; column 7, lines 22-33; biasing device inherent to invention)
- {claim 13} the tray is adapted to support the sheet generally across an entire lower surface of the sheet (figure 1a, reference 12, A)
- {claim 14} A printing mechanism (as taught in claim 1); a tray that supports at least one sheet of print media (as taught in claim 1), the tray including a tray advancing device that advances the tray through a stationary printzone during printing on the sheet (figure 1a, reference 22; column 7, lines 22-33)

- {claim 15} the tray advancing device comprises a track of regularly spaced recesses (figure 1a, reference 22) adapted to mate with a tray advancing gear of a body of a printing mechanism (figure 1a, reference 24)
- {claim 17} the tray further comprises a sheet retention device (figure 1a, reference 12) and a biasing device (as taught in claim 12)
- {claim 18} the retention device comprises a plurality of arms adapted to contact a top surface of the sheet in an edge region thereof (figure 1a, reference 12; arms drawn in)
- {claim 19} the biasing device comprises a support plate (figure 1a, reference 14) and a spring (figure 7, reference 64)
- {claim 20} A printing mechanism (as taught in claim 1); support means (figure 1a, reference 12); advancing means (column 2, lines 50-59; column 7, lines 22-34); printing means (column 7, lines 22-34)
- {claim 22} the support means supports the sheet in a generally flat orientation during printing on the sheet (figure 1a, reference 12, A)
- {claim 23} the advancing means is adapted for retracting the support means through the printzone after printing (as taught in claim 11; column 7, lines 28-29)
- {claim 27} A method of printing (column 7, lines 22-44); providing a sheet of print media having a length (figure 1a, reference A); providing a support (figure 1a, reference 12); moving the support and the sheet supported thereon through a printzone (column 7, lines 23-44); printing on the sheet (column 7, lines 23-44)
- {claim 28} retracting the support rearwardly through the printzone after printing (figure 7, reference a; column 7, lines 28-29)



Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-5 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Furukawa et al (US Pat 5467111) in view of Griswold (US Pat 3888582).

Furukawa et al discloses:

- {claims 4 and 5} a printing mechanism (as taught in claim 5)
- {claim 29} A method of printing (as taught in claim 27)

Furukawa et al differs from the claimed invention in that it does not disclose:

- {claim 4} the tray is adapted to support a stack of sheets of print media
- {claim 5} a top sheet of the stack is exposed to the printhead during printing
- {claim 29} removing the sheet from the support so as to expose a second sheet and thereafter repeating the method for printing on the second sheet

Griswold discloses:

- {claim 4} platen (i.e. tray) adapted to support a stack of sheets of print media (figure 1, reference 13)

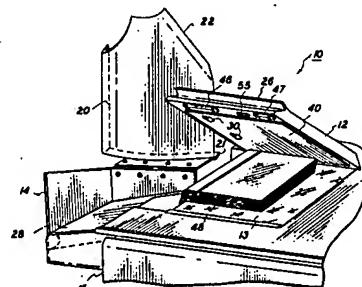


FIG. 1

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Griswold into the invention of Furukawa et al

so that the platen (i.e. tray) is adopted to support a stack of sheets of print media. The motivation for the skilled artisan in doing so is to gain the benefit of faster document handling (abstract). The combination naturally suggests that a top sheet of the stack is exposed to the printhead during printing. The combination also naturally suggests the removing of the sheet from the support so as to expose a second sheet and thereafter repeating the method for printing on the second sheet.

Claims 6, 16, 21, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Furukawa et al (US Pat 5467111) in view of Reed et al (US Pat 5081494).

Furukawa et al discloses:

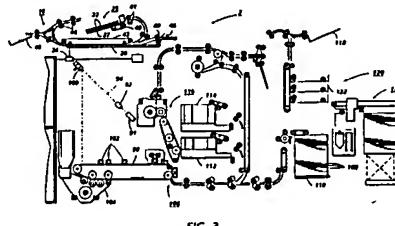
- {claim 6} a printing mechanism (as taught in claim 1)
- {claim 16} a printing mechanism (as taught in claim 14)
- {claim 21} a printing mechanism (as taught in claim 20)

Furukawa et al differs from the claimed invention in that it does not disclose:

- {claim 6} position indicia, position sensor
- {claim 16} position indicia adapted to facilitate sensing of a position of the tray relative to the printzone
- {claim 21} sensing means

Reed et al discloses:

- {claims 6} position indicia on platen (column 3, lines 27-28); array (i.e. position sensor; figure 3, reference 24; column 2, lines 44-54)



- {claim 16} positioning indicia (column 3, lines 26-27) adapted to facilitate sensing of a position of the tray relative to the printzone (in light of the teaching in column 3, lines 20-34; scanning senses position of paper relative to the printer, which implies the sensing of the tray position, since the tray holds the paper)

Art Unit: 2853

- {claim 21} sensing means (as taught in claim 16)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the position indicia and position sensor sensing means disclosed by Reed et al into the invention of Furukawa et al. The motivation for the skilled artisan in doing so is to gain the benefit of successfully scanning the position of a page put on a platen (column 3, lines 19-34).

Claims 7 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Furukawa et al (US Pat 5467111) in view of Youn (US Pat 6189990).

Furukawa et al discloses:

- {claim 7} printing mechanism (as taught in claim 1)
- {claim 24} printing mechanism (as taught in claim 20)

Furukawa et al differs from the claimed invention in that it does not disclose:

- {claim 7} guide device adopted to space the sheet a predetermined distance from the printhead during printing
- {claim 24} guide means

Youn discloses:

- {claim 7} guide device (figure 3, reference 1, 3; column 1, lines 17-22; abstract)

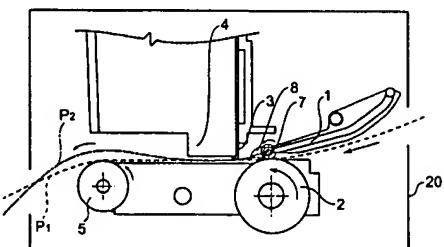


FIG. 3

- {claim 24} guide means (figure 3, reference 1, 3; column 1, lines 17-22; abstract)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the guide device/means disclosed by Youn into the invention of Furukawa et al in order to space the sheet a predetermined distance from the printhead during printing. The motivation for the skilled artisan in doing so is to gain the benefit of preventing the head from inappropriately staining the paper with ink (column 1, lines 17-22).

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Furukawa et al (US Pat 5467111) in view of Shimada (US Pat 5327166).

Furukawa discloses, with respect to claim 25, a printing mechanism (as taught in claim 20).

Furukawa differs from the claimed invention in that it does not disclose that the printing means comprises an inkjet printhead.

Shimada discloses, with respect to claim 25, a printing method that pertains to both optical printers and ink jet printers (column 7, lines 45-48; thus Shimada implies that optical printers and ink jet printers can be considered equivalent replacements since they both perform the same function, which is recording images (column 1, lines 8-12)).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to replace the optical printer disclosed by Furukawa et al with the ink jet printer disclosed by Shimada. This would have been obvious because optical and ink jet printers can be considered equivalent replacements as taught by Shimada.

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Furukawa et al (US Pat 5467111) in view of Mochizuki (US Pat 5266969).

Furukawa et al discloses, with respect to claim 26, a printing mechanism (as taught in claim 20).

Furukawa et al differs from the claimed invention in that it does not disclose a coating means for coating the sheet with a coating after printing.

Mochizuki discloses, with respect to claim 26, a coating means (column 1, lines 51-55; column 2, lines 52-55)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the coating means disclosed by Mochizuki into the invention of Furukawa et al in order to coat the sheet with a coating after printing. The motivation for the skilled artisan in doing so is to gain the benefit of intimately fixing ink on the sheet and preventing discoloration of the ink (column 1, lines 51-55).

Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Furukawa et al (US Pat 5467111) in view of Reed et al (US Pat 5081494) and Fukae (US Pat 4780740).

Furukawa et al discloses:

- {claim 30} A printing mechanism (as taught in claim 1); a movable print media tray for supporting a sheet of print media thereon (figure 1a, reference A, 12), the tray including a track of regularly spaced recesses (figure 1a, reference 22); a housing (inherent to invention in view of the teaching that the disclosed transporting apparatus is suitable for use with a recording apparatus (column 1, lines 6-10), which implies that the transporting apparatus is contained within the housing of the printer); printhead positioned within the housing that defines a stationary printzone having a scanning axis (column 7, lines 23-44); motor positioned within the housing (figure 1a, reference 28; column 1, line 40; column 8, lines 6-11); a gear positioned within the housing (figure 1a, reference 24), the gear powered by the motor and mating with the regularly spaced recesses of the tray (figure 1a, reference 22) so as to move the tray through the printzone perpendicular to the scanning axis during printing on the sheet (column 7, lines 22-44)

Furukawa et al differs from the claimed invention in that it does not disclose:

- {claim 30} the tray including retention arms, a support plate, and a biasing device for biasing the support plate against the retention arms so as to support the sheet in a generally flat printing position within the tray; position indicia, position sensor

Fukae discloses:

- {claim 30} the tray including retention arms (figure 1, reference 25), a support plate (figure 1, reference 22), and a biasing device (figure 1, reference 26) for biasing the support plate against the retention arms so as to support the sheet in a generally flat printing position within the tray

Reed et al discloses:

- {claim 30} position indicia on platen (column 3, lines 27-28); array (i.e. position sensor; figure 3, reference 24; column 2, lines 44-54)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Fukae into the invention of Furukawa. The motivation for the skilled artisan in doing so is to gain the benefit of securely positioning the recording medium in the media tray.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the position indicia and position sensor sensing means disclosed by Reed et al into the invention of Furukawa et al. The motivation for the skilled artisan in doing so is to gain the benefit of successfully scanning the position of a page put on a platen (column 3, lines 19-34).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bjune (US Pat 6637852) discloses a method for media handling in an imaging device.

Mayer et al (US Pat 5746528) discloses a hard copy apparatus with a print media telescoping tray system.

Hill et al (US Pat 6039479) discloses a printing assembly with continuous stock cutter and sheet feeder for feeding cut sheets to printer.

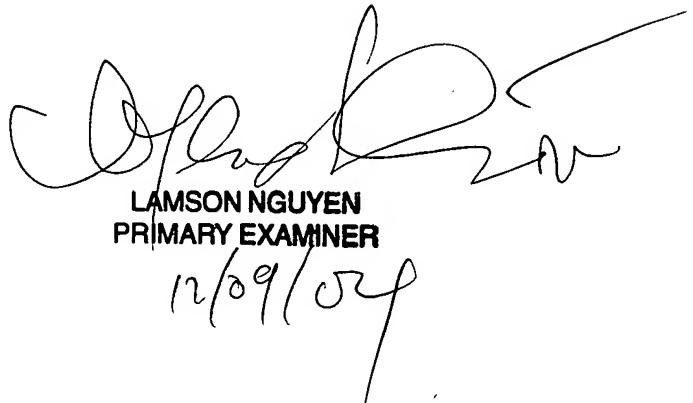
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard S Liang whose telephone number is (571) 272-2148. The examiner can normally be reached on 8:30-5 Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

lsl

LSL



LAMSON NGUYEN
PRIMARY EXAMINER
12/09/09